Farm and Stream

Water use, farm management and the protection of the aquatic environment

FARM AND STREAM

WATER USE, FARM MANAGEMENT AND THE PROTECTION OF THE AQUATIC ENVIRONMENT

Prepared for:

B.C. Federation of Agriculture
Interdepartmental Co-ordinating Sub-Committee

Edited by: Gordon D. Gram

September 1979

TABLE OF CONTENTS

WATER USE, FARM MANAGEMENT AND THE PROTECTION OF THE AQUATIC ENVIRONMENT

	Page
B.C. FEDERATION OF AGRICULTURE AND GOVERNMENT AGENCY CO-OP EFFORT	1
IDENTIFICATION OF WATER USE ISSUES AND CURRENT LEGISLATIVE REQUIREMENTS	1
Irrigation Water Extraction and Storage	1
Water Licences	1
Access to the Water Source	2
Fish Resource Clause	2
Water Storage	2
Water Intake Requirements and Maintenance	3
Stream Alteration and Land Improvements	4
Stream Diversion	4
Streambank Protection and Stabilization	5
Flood Control, Floodplain Reclamation and Drainage	5
Flood Proofing Farm Buildings	6
Draining and Reclaiming Ponds and Swamps	6
Provincial Assistance for Emergencies	7
Streamside Green Strips	7
Groundwater	8
Water Extraction for Private Fish Ponds	8
Pollution of Fish-Bearing Waters	8
Application of Pesticides and Herbicides	8
Fertilizers	9
Suspended Sediment	9
Beaver Control	10
EARLY CONTACT BETWEEN FARMER AND DISTRICT AGRICULTURIST	10
INTERMINISTERIAL REVIEW OF WATER ACT APPLICATIONS AND THE APPEAL	10
EXAMPLES OF APPLICATION FORMS AND APPROVALS	12
1. Application for a Water Licence	13
2. General Information on Water Law in British Columbia	15
3. Information Regarding Applications for Water Licences	16
4. Water Licence for Irrigation with Fish Resource Clause	17
5. Application to make Changes in and about a Stream	18
6. Letter of Approval for Changes in and about a Stream	19
MORE INFORMATION - BOOKLETS AND PAPERS AVAILABLE	22
DIRECTORY TO THE AGENCIES	23
Water Rights Branch Regional Offices	24
Federal Dept. of Fisheries & Oceans District Offices	25
Fish and Wildlife Branch Regional and District Offices	30
Water Investigations Branch Offices	35
Okanagan Basin Implementation Program	35
B.C. District Agriculturists Offices	36
Farm and Stream Committee	38

B.C. FEDERATION OF AGRICULTURE AND GOVERNMENT AGENCY CO-OPERATIVE EFFORT

In early 1977, the B.C. Federation of Agriculture executive initiated an enquiry into the nature of governmental constraints placed upon farmers attempting to manage water for the benefit of farm operations. While it is recognized that surface water bodies of various sorts are essential for preservation of fish and wildlife habitat, the BCFA believes that management of farmland near fish bearing streams and manipulation of water for agricultural purposes can take place without unduly harming the aquatic resource or restricting water use by wildlife. At present, however, farmers feel constrained by the administration of federal and provincial resource-use legislation; conflicts between farmers and government agencies over matters of water use and control arise; and it is the farmer who all too often ends up on the short end of the stick. What appears to be needed is a co-operative effort between the farm community and the resource agencies to develop realistic guidelines for water management that will not prejudice the interests of any of the resource users.

The farm and stream committee believes that there should be developed procedures for farmers to follow when dealing with water management problems on the farm. These procedures, or guidelines, would help the farmer understand and cope with government regulations concerning water management.

Furthermore, the committee sees a need to develop a system for solving water management problems that will minimize the constraints placed upon farm management and, at the same time, adequately protect the aquatic environment. It is the opinion of some members of the farm community that strict application to the provisions of the Federal Fisheries Act and the Provincial Water Act is often carried out without adequate consideration of agricultural interests. In practice, this need not be the case. Confrontation between farmer and government agency that can lead to legal action against the farmer must be avoided wherever possible.

This booklet is intended to stimulate discussion of water management problems related to farm management and concerns for the preservation of the aquatic environment. Current legislative requirements are explained and conflict areas identified. Also included is an agency directory and examples of application and approval forms.

IDENTIFICATION OF WATER USE ISSUES AND CURRENT LEGISLATIVE REQUIREMENTS

Irrigation Water Extraction and Storage

Water Licences

A *water licence is* a document that conveys to the licensee the legal right of diverting a defined quantity of water from a specific water source for a stated purpose on a described parcel of land, during a given period of the year. The licence is held in perpetuity provided beneficial use is maintained, the annual fees are paid and the licensee adheres to the conditions of the Water Act.

For example, Water Licence #16530 permits the irrigation of some 70 acres of land with water from Kalamalka Lake. The licence identifies the land, namely:

> *S.E. 1/4 of Section 6, except Plan 25449 and North 1/2,*
> *S.W. 1/4 of Fractional S.E. 1/4 of Section 16, Township 9,*
> *ODYD of which 70 acres may be irrigated.*

The source of water is Kalamalka Lake and the point of diversion is shown on a plan attached to the licence. The amount of water that may be taken is 175 acre feet per annum and may be used between April 1st and September 30th. The method of diversion is stipulated to include a pump, pipe and sprinkler system. The licence was first issued March 7, 1945, and passes to each new owner with the sale of the land. However, should the land be subdivided it would be incumbent upon the new owners to apply to the Comptroller of Water Rights for an apportionment of the licence.

Access to the Water Source

It is sometimes necessary to cross adjacent property to get to the source of irrigation water. If the land involved is Crown land, the right-of-way is issued with the water licence. If it is private property, then the licensee has the obligation to seek the agreement of the land owner. Should permission not be granted, there is provision within the Water Act for the licensee to expropriate the necessary easement. Whether there is a formal easement or not, it is illegal for any land owner to interfere with the works of the licensee without six months notice in writing.

Fish Resource Clause

Federal and provincial resource managers may be concerned about farmers' demands for new water sources for irrigation and for the expanded use of existing sources; that is, the "fully licenced" stream. The *fish resource clause* is a form of insurance or fallback for the Fisheries Officer which has helped the process of meeting these demands for more sources of water.

Where new water licences on heavily used streams are issued, a fish resource clause may be added to the water licence. It enables the Regional Engineer, Water Rights Branch, to restrict or prohibit the taking of water during a critical low flow period, in order to preserve fish populations. The Regional Engineer may also reduce the volume available to the licensee during a critical low flow period. Furthermore, expanding the use of existing sources may be facilitated by requiring metering of actual water use in existing fully licenced streams.

Periods of low flow create problems for fish and for farmers. While the fish resource clause may enable the granting of more licences for irrigation sources and the greater use of existing systems, it also creates the potential for serious disruption of farm operations and severe economic loss, should the clause be invoked and irrigation water cut off or seriously reduced. The obvious question is: How can the farmer safeguard against such an eventuality? In many cases, the key to designing a farm water use program that will be compatible with fisheries habitat protection is a water storage system.

Water Storage

A *storage licence* from the Comptroller of Water Rights, authorized the licensee to construct storage works and to impound water. This may include dam construction and dugouts. The plans and specifications for the storage

dam or dugout must be approved by the Regional Engineer prior to construction. It may be necessary to include facilities in the storage dam to permit passage of both adult and juvenile fish upstream and downstream and to allow a release of adequate volumes of water to maintain fish population downstream.

The Fish and Wildlife Branch is involved in the application and review process. The Branch will be particularly concerned with proposals for damming or impounding water; however, dugouts or ponds off the stream channel with a partial diversion of stream flow are more often acceptable in terms of fish habitat protection.

Water storage is encouraged on heavily used streams and streams with low flow problems. In fact, the provisions of storage may be a condition of a water licence, often combined with prohibition of diversion of water during specific periods of the year.

If anadromous fish (e.g. salmon) are involved, project funding for water storage systems may be available through the ARDSA program, Ministry of Agriculture.

Water Intake Requirements and Maintenance

Because of their small size, rearing fish can be damaged or trapped in large numbers by being pulled through pump intakes and gravity feed irrigation ditches. The Fisheries Act requires that fish-proof screens be installed to prevent rearing fish from entering water intakes. Specifications for such screens are available from Regional Fish and Widlife Branch offices, or from the Department of Fisheries and Oceans District offices.

Fish screens should be checked frequently to ensure that they are intact and fully functional, as well as to remove debris that might block the free flow of water for irrigation. It may also be advantageous to place fish screens at diversion points, such as at the entrance to water storage systems.

Many irrigation water intakes require annual instream maintenance - particularly displacement of gravel to open or close the intake. Such maintenance may be subject to the *B.C. Gravel Removal Order,* a regulatory system developed to control certain instream activities that could be harmful to the fish resource. The gravel removal order requires that a permit be obtained prior to removal or displacement of gravel in any of 107 listed streams, or in the spawning area of any stream in B.C. Local conservation or fisheries officers will be able to assist in defining spawning areas in streams that are not listed in the B.C. Gravel Removal Order.

A permit under the B.C. Gravel Removal Order is required by farmers who undertake annual instream maintenance of irrigation intakes that may involve the displacement of gravel or the construction of a diversion. The permit can be obtained from the Regional Fish and Wildlife Branch office or the district office of the Department of Fisheries and Oceans. The Gravel Removal Order is currently under review, and consideration is being given to a letter of permit that will be valid for up to five years,

requiring only notification of the local conservation officer or fisheries officer five days prior to each displacement of gravel.

Stream Alteration and Land Improvements

A *land improvement licence* or an *approval letter* issued by the Comptroller of Water Rights through the regional office of the Water Rights Branch authorizes the land owner to permanently alter or annually maintain a stream. Provisions may be for the diversion or impounding of water to protect property, or to facilitate the reclamation, drainage or other improvement of the land.

Any activity associated with a stream, ditch, diversion or other water body that may harmfully alter, disrupt or destroy fish habitat requires review under the Fisheries Act. This may include maintenance or system expansion of a stream that runs through the farm or the system of farm ditches that have been maintained, on and off, for years and may even have been originally created, in part or in whole, by the farmer. The Water Rights Branch, Department of Fisheries and Oceans and/or Fish and Wildlife Branch should be contacted prior to undertaking any activity that may affect a fish-bearing water-course. These officers will determine if the area is in fact fish habitat and if a licence or permit is required. Because instream work is usually approved for summer months only, farmers are encouraged to contact officers early in the season.

Stream Diversion

For stream diversion, a *land improvement licence or approval letter* is required from the regional office of the Water Rights Branch. Section 41(1) of the Water Act is the prohibitive section and states that it is an offence to divert water from any stream without authority. The authority is the Water Rights engineer, whose orders may be appealed to the Comptroller of Water Rights. The definition of a stream under the Water Act is all embracing and includes any natural water course or source of water supply, whether usually containing water or not and any lake, river, creek, spring, ravine, swamp or gulch!

Stream diversions often involve straightening a water course in order to increase rate of runoff or reduce streambank erosion. However, such diversions may alter flow conditions and cause additional channel and property damage downstream. In such situations, fish habitat might also be affected or destroyed for some distance downstream of the actual diversion area, thereby reducing fish populations. If the works contemplated cause concern to downstream land owners, the farmer may well be advised to discuss project specifications with the Engineering Branch of the B.C. Ministry of Agriculture as well as the Department of Fisheries and Oceans and/or Fish and Wildlife Branch and the Regional Engineer of the Water Rights Branch.

Diversion of a river course rarely solves erosion problems and frequently has unforeseen and undesirable results. Experience indicates that erosion problems are generally best overcome by holding the river "where it is" by the addition of rock riprap. Free technical advice is available from the Water Investigations Branch upon request to the Director.

Streambank Protection and Stabilization

Unless care is taken in the design of streambank protection and erosion control systems, works may prove unsuccessful at the site and produce flow conditions that result in serious damage to the stream channel and to downstream property. Stream channel erosion may also adversely affect fish populations by altering the aquatic habitat and introducing silt or other deleterious substances into the stream.

The erosion control technique that least affects the stream environment is the placement of clean, silt-free, adequate sized riprap. Permission should be obtained from Water Rights Branch, Department of Fisheries and Oceans and Fish and Wildlife Branch, before undertaking streambank protection activities that may affect the watercourse. In some cases, Water Investigations Branch may partially finance streambank protection activities.

Under the River Assistance Program, limited funds are available each year on a 25% local - 75% provincial cost-sharing basis to provide assistance with emergency flooding and erosion problems affecting agricultural lands or existing developments. Assistance is provided for permanent works only and maintenance work, such as gravel removal, is not eligible under the program. Applications are dealt with on a priority basis and should be addressed to: The Director, Water Investigations Branch, Ministry of Environment, Parliament Buildings, Victoria, B.C. V8W 1X5.

The circumstances under which approval is required from the Comptroller of Water Rights for streambank protection projects are many. The simplest approval is to discuss the project with the Regional Engineer who will advise the land owner of the requirements, will assist him in acquiring any necessary permissions, and if relevant, will advise with regard to an application for financial support under the River Protection Assistance Program administered by the Water Investigations Branch.

Flood Control, Floodplain Reclamation and Drainage

Floods are caused by sudden increases in runoff resulting in more water volume than the watercourses can handle. Examples range from spring melt-water runoff and stream and river bank overflow to flash flooding caused by sudden summer storms. An increasingly common source of flood water problems to farmers is the runoff from urban developments on uplands adjacent to or upstream of farmlands. In terms of unchecked water runoff, the effect is similar to that caused by clear cut logging of lands adjacent to or upstream of farms. Both activities require runoff retention works and/or improvements to downstream watercourses in order to offset the increased flood hazard to the adjacent or downstream farmlands.

In some areas such as on river deltas, surface draining of farmland is necessary. While the discharge of sub-surface drainage into a natural watercourse does not require a licence, diversion of water, including flood water, from one watershed to another, does require a licence.

Annual instream maintenance of flood control facilities that involve stream bed and bank disturbance can be detrimental to the aquatic habitat. In order to minimize this problem, maintenance activity should be carried out in a manner and at a time of year least likely to disturb the fisheries habitat and the fish population. As with irrigation system maintenance, a letter of permit under the B.C. Gravel Removal Order is required prior to the displacement of gravel from fish-bearing streams. Contact regional Fish and Wildlife Branch offices and/or Department of Fisheries and Oceans District offices.

Flood Proofing Farm Buildings

Flood proofing requirements for farm buildings has been a recent topic of discussion between the Water Investigations Branch and the Engineering Branch of the Ministry of Agriculture. The Water Investigations Branch program of flood plain management is aimed at reducing the potential for damage to property and loss of life from floods. The means of achieving this objective are flood requirements in local authority zoning bylaws and conditions for subdivision approval under the Land Registry Act. Requirements specify building setbacks from the natural boundary of a water course and floor elevations above high water levels.

The question has been raised as to what farm buildings should be flood proofed and how should requirements differ between dyked and undyked lands. While minimum elevation requirements seem unnecessary for lands protected by dykes, it is suggested that new buildings be "wet" flood proofed or constructed in such a manner that flood damage is kept to a minimum. Buildings in undyked farmlands are another matter and while "wet" flood proofing of barns may be sufficient, all farm dwellings and storage facilities should be located off the flood plain or elevated to above high water levels.

Assistance on questions of flood proofing and location of buildings within a flood plain may be obtained from the Engineering Branch of the Ministry of Agriculture.

Draining and Reclaiming Ponds and Swamps

The draining and filling of marshes, sloughs or swamps requires a permit from the Comptroller of Water Rights. The drainage permit application should be completed with the aid of the District Agriculturist and presented to the regional office of the Water Rights Branch. It should be noted that the Water Act contains a very broad definition of surface water, which includes sloughs, swamps and bodies of water that may only exist above the ground from time to time.

Draining ponds and swamps to reclaim arable acreage can create problems associated with stream hydrology. In their natural state, ponds and swamps act as buffers; they store water during periods of heavy rainfall and allow water to be released slowly over a long time during the low flow period. Ditching and draining these areas can aggravate the natural low stream flow problem during dry summer months. In addition, these ponds and swamps are often important rearing habitat for juvenile salmonoids. Fisheries

agencies prefer that such areas be preserved in their natural state and suggest that the District Agriculturist be consulted well in advance of any plans to drain or alter such water bodies.

Adequate consultation with the agencies and assurance that proper permits are obtained from the Comptroller of Water Rights also protects the farmer against a sudden order from the Department of Fisheries and Oceans or Fish and Wildlife Branch to halt works on a drainage project, thereby disrupting the farmer's summer works program and causing financial loss.

Provincial Assistance for Emergencies

There is limited provincial funding available each year for emergency flood prevention work under the Channel Clearing Program administered by the Water Investigations Branch. Under the Channel Clearing Program, both technical and financial assistance is available to individuals, groups of individuals or local authorities for emergency clearing of log jams or stream blockages. The province pays the cost of approved works and the land owner is responsible for provisions of rights-of-way, licences, construction and future maintenance. Applications for funding are made through the Regional Engineer, Water Rights Branch, Ministry of Environment.

Streamside Green Strips

Natural vegetation along fish-bearing water courses is often completely removed to the water's edge as a result of field clearing, stock watering or flood and erosion control and maintenance activities. Streamside clearing can have adverse effects upon the aquatic habitat and the fish population it supports. For example, removal of streamside vegetation can cause the following problems: a loss of shading resulting in increased summer water temperatures and decreased dissolved oxygen levels; a severe reduction in streambank stability resulting in increased erosion; and an increase in the amount of pollutants reaching the stream. To maintain aquatic productivity, therefore, it is important that an adequately wide green strip be preserved along fish-bearing water courses.

The Federal Department of Fisheries and Oceans has developed guidelines for green strip widths in areas proposed for urban development. However, these recommendations were designed to isolate urban developments from streams and may not adequately satisfy the problems that are specific to the agricultural community. Green strip widths in agricultural areas can best be determined on-site by the farmer, the district agriculturist, and a Dept. of Fisheries and Oceans or Fish and Wildlife Branch representative. With this approach, agreements can also be worked out to allow, for example, selective removal of vegetation adjacent to the field side of the green strip to alleviate problems associated with shading of crops.

Similarly, leave strips might be considered on one side of the stream only, leaving the other for machinery access for maintenance and clearing of the water channel. Leaving the vegetation undisturbed along a stream can also be of advantage to the farmer in minimizing erosion and stabilizing streambanks. Non fish-bearing drainage ditches subject to regular maintenance, of course, would not require leave strips.

Groundwater

A water licence is not currently required to develop and use groundwater sources. The Groundwater Division, Water Investigations Branch, Ministry of Environment, Victoria, has data on many existing wells and is prepared to advise land owners on the prospect of developing groundwater sources on their land. A request for groundwater advice or information should include the legal description of the property and the quantity of water required.

Water Extraction for Private Fish Ponds

The breeding or rearing of native fish species, either as a full scale fish farming operation or as a few fish in a "trout pond", requires a *permit* from Fish and Wildlife Branch.

Native fish may be stocked and raised only in artificially created ponds, not in natural lakes, watercourses or pools created by damming a stream. Live fish or eggs may not be taken from, nor introduced into natural lakes or watercourses.

A *water licence* is required if water for the fish farming operation is to be obtained from a natural watercourse. The removal of topsoil and the placement of gravel fill, etc., that may be involved in constructing fish ponds on land that is within the agricultural land reserve, may require a permit under the Soil Conservation Act. Enquiries should be made to the Municipal or Regional District Soil Conservation Officer. Application must also be made to the Water Rights Branch for a licence to divert and store water. Some farmers may wish to consider the potential of multiple use of water for irrigation and aquaculture. ALDA loans from the Ministry of Agriculture are available for fish farming. Farmers wishing information on fish farming should contact the Fisheries Biologist in the Regional Fish and Wildlife Branch office.

The publication "The Operation of Private Fish Ponds and Commercial Fish Farms in British Columbia" may be obtained by writing to Fisheries Management Division, Fish and Wildlife Branch, Parliament Buildings, Victoria.

Pollution of Fish-Bearing Waters

Fish populations may be damaged by the introduction into streams - either from runoff or from drainage ditches - of substances such as pesticides, herbicides and fertilizers, suspended sediments and animal wastes from ponds and waste disposal sites.

Streamside green strips have a role in preventing pollution from reaching fish-bearing streams. In addition, temporary settling basins at key locations can intercept runoff from problem areas and allow the removal of most settleable solids before they enter the watercourses.

Application of Pesticides and Herbicides

The Federal Pesticides Product Control Act makes it an offence to use any pesticide or herbicide, except in accordance with the regulations. Pro-

secution for the careless use of pesticides can be initiated under Section 33 of the Fisheries Act, which prohibits the deposit of any deleterious substance into fish-bearing water bodies or watercourses.

Fertilizers

Introduction of fertilizers into streams can have a subtle but harmful effect upon the aquatic environment by promoting excessive algal and vegetative growth in the water. This results in a reduction of aquatic invertebrate food production, a clogging of the watercourse and, when the vegetation dies, a severe reduction in dissolved oxygen concentration. To help prevent the introduction of nutrients in the form of fertilizers - whether natural stock wastes or commercial products - application should not exceed the assimilative capacity of the soil. The nutrients should not, of course, be applied directly into drainage courses or onto the green strip adjacent to a stream.

An additional concern regarding nutrient introduction into watercourses is the leaching of animal wastes from storage areas and stock impoundments, where such wastes are concentrated. Efforts should be made to contain these wastes and prevent their washing into drainage ditches and watercourses.

Suspended Sediment

Whenever ground cover is disturbed and erodable soil is exposed, runoff and groundwater will suspend and transport sediment to drainage ditches and watercourses. When silt reaches fish-bearing watercourses, it can cause severe stress or even mortality in rearing fish through abrasion of delicate gill membranes. As the sediment settles out, it can suffocate incubating salmon eggs in the stream bed gravel and cover bottom organisms, which form an important food source to salmonoids.

In order to control the amount of sediment that reaches fish-bearing watercourses during land clearing and cultivation activities, settling basins can be utilized to store silt-laden runoff and allow sediment to settle. These settling basins can take a variety of forms from a shallow excavated pond to a natural swale or depression. The outlet of these basins should be impermeable enough to allow ponding but also porous enough to allow the stored water to filter through and drain the pond during dry periods.

Unrestricted stock access to streams for watering purposes results in damage to the stream bed and banks, as well as direct introduction into the stream of stock wastes and sediment from the trampled stream banks. Adequate fencing and/or the retention of a green strip of dense vegetation along each side of the stream can help to alleviate this problem. Off-stream stock watering is a preferable alternative to avoid the problem of damage to the stream environment and erosion of streambanks.

Guidelines for waste management, the siting of farm buildings and the location of feed lots have been established under the BCMA and BCFA Agricultural Environmental Control Program. Details of this farmer program of pollution prevention are available from the Engineering Branch, Ministry of Agriculture.

Beaver Control

Beaver dams on streams can create attractive habitat for fish and waterfowl. However, these dams may also cause flooding of agricultural land. If a farmer has problems with beavers and their dams, he should contact the local conservation officer of the Fish and Wildlife Branch, who will assist in the removal of the beaver.

EARLY CONTACT BETWEEN FARMER AND DISTRICT AGRICULTURIST

The District Agriculturist is often the farmer's first and sometimes only contact regarding planned activities that could affect fish habitat and fish populations. Upon hearing of a proposal from a farmer, either written or verbal, the District Agriculturist will assist the farmer in contacting the necessary agencies. Application forms are then sent by the applicant to the appropriate agencies for assessment, comment and decision. This procedure will afford the District Agriculturist an early opportunity in the referral system to comment on the merits of the water use or water management project.

The District Agriculturist has on hand examples of application forms for the various licences and letters of permit that may be required by the farmer.

INTERMINISTERIAL REVIEW OF WATER ACT APPLICATIONS AND THE APPEAL

The Ministerial review system allows each agency to review an application for a water licence, land improvement licence, etc. and to comment before a decision is made. Regrettably the period required to obtain a water licence or land improvement licence has been as long as two years. Adjustments to staffing and procedures have significantly reduced this processing time, and further reductions are being achieved as the program of decentralization of the Water Rights Branch continues.

The Water Act and the administrative policies applied to it provide the farmer with clear channels for appeal when a water licence or land improvement licence application is denied, or when a farmer is subject to an order of the Regional Engineer, Water Rights Branch. It is, however, essential that the farmer be familiar with his rights and with the manner in which they can be exercised.

Applications for water licences, or land improvement licences are initially investigated by the Regional Engineer who makes recommendations to the Comptroller of Water Rights who is the issuing authority for the licence. A person whose application for a water licence is refused may appeal the Comptroller's decision to the Lieutenant-Governor in Council any time within one month from the date of refusal notification.

Orders by the Regional Engineer may be appealed to the Comptroller of Water Rights within 15 days from the date of the order. Should the Comptroller, on appeal, uphold the order, the farmer may appeal to the Lieutenant Governor in Council as mentioned above.

It is stressed that the policies and procedures of the Water Rights Branch provide the opportunity for a farmer to fully present his case, and for the positions of other agencies to be reviewed in context. However, the pertinent legislation is under review with the object of conforming to a standard appeal process to be incorporated in all similarly related provincial legislation.

The common objective of both government agencies and farmers alike must be to avoid conflicts which lead to the appeal process. This can best be achieved by prior consultation between agencies and individuals who have concerns regarding specific applications for a water licence, and by the farmer using the advice of the District Agriculturist.

The Comptroller may at any time on notice amend or revoke any order of the Comptroller; similarly, a Regional Engineer may take like action in respect of any order of the Regional Engineer. In practical terms this means that, if circumstances relevant to an order or to a refusal of a water licence change, such order or refusal could be reviewed at the request of the person affected.

The essential inter-ministry review component of water licensing procedure has not generally been a significant delaying factor. In relatively few cases, where the objections to the granting of a water licence are difficult to reconcile, delays do occur. Since, however, water licences for irrigation, storage, stock watering, etc., are perpetual, the concerns of other agencies and licensees must be given full consideration.

EXAMPLES OF APPLICATION FORMS AND APPROVALS

1. Application for a Water Licence
2. General Information on Water Law in British Columbia
3. Information regarding Applications for Water Licences
4. Water Licence for Irrigation with Fish Resource Clause
5. Application to make Changes in and about a Stream
6. Letter of Approval for Changes in and about a Stream

FILE WITH WATER RECORDER

FOR WATER RECORDER STAMP

13

Application for a Water Licence

WATER ACT

(Section 8)

I/we _____
(Full name or names, if land owned jointly.)

of _____
(Mailing address)

hereby apply to the Comptroller of Water Rights for a licence to {divert and use / store} water out of _____ which flows _____
(Name of creek, lake, or spring.) (Direction of flow.)

and discharges into _____ and give notice of my application to all persons affected.

The {point of diversion / storage dam} will be located at _____
(Give distance and direction from some surveyed or known point.)

The quantity of water to be diverted or stored is _____
(Cubic feet per second, gallons per day, or acre-feet per annum.)

The purpose for which the water will be used is _____

The land or mine on which the water will be used is Lot _____
(Full and correct legal description)

_____

A copy of this application was posted on the _____ (Day.) _____ (Month.), 19__

at the proposed point of diversion or site of the dam and on the land or mine where the water is to be used

and two copies will be filed in the office of the Water Recorder at _____ British Columbia.

Objections to this application may be filed with the said Water Recorder or with the Comptroller of Water Rights, Parliament Buildings, Victoria, B.C. V8V 1X5, within thirty days of the serving of a signed copy of the application.

_____
Applicant.

By _____
Agent.

_____
Agent's address.

IMPORTANT

Every applicant must do the following:

(1) *Post the application on the ground*, that is, in conspicuous places at or near the proposed point of diversion, site of the dam (if any), and place of use.

(2) *File two copies with the Water Recorder* in whose district the point of diversion will be, within twenty days of the posting on the ground.

(3) Within ninety days of the posting of the application on the ground, serve signed copies on all owners of land or mining property that will be affected physically by the proposed works or by the operation or utilization thereof, and on all licensees or prior applicants whose points of diversion are at or below the applicant's proposed point of diversion.

All copies must be signed and completed by filling in the blanks in the above form; and, in addition, the two copies filed with the Water Recorder must contain a sketch showing the applicant's land, the location of the point of diversion and the dam (if any), and all land touched or crossed by the works, and the additional information indicated on the other side of this form.

Both sides of the two copies filed with the Water Recorder must be fully and correctly completed or the application may have to be returned.

It is advisable to file the application with the Water Recorder as soon as possible after posting it on the ground because the date of filing will, in most cases, determine the priority of the licence that may be issued.

NOTE.—This sheet need only be completed on the two copies of the application filed with the Water Recorder.

To the Comptroller of Water Rights:

In support of my application for a water licence I submit the following information:—

(1) My title to the place of use is .....
(Whether registered owner, agreement holder, pre-emptor, etc.)

(2) The proposed works will be .....
(Give general description—pump, pipe, ditch, etc.)

.....

.....

.....

(3) The dam to be constructed will be a ..... dam, and
(Type)

will be ..... feet in height, and ..... feet in length.

(4) The maximum area of the reservoir will be ..... acres.

(5) The depth of storage at the dam, from bottom of sluice-pipe to crest of the spillway, will be ..... feet.

(6) The head of water to be used will be ..... feet.
(For power and hydraulic mining only.)

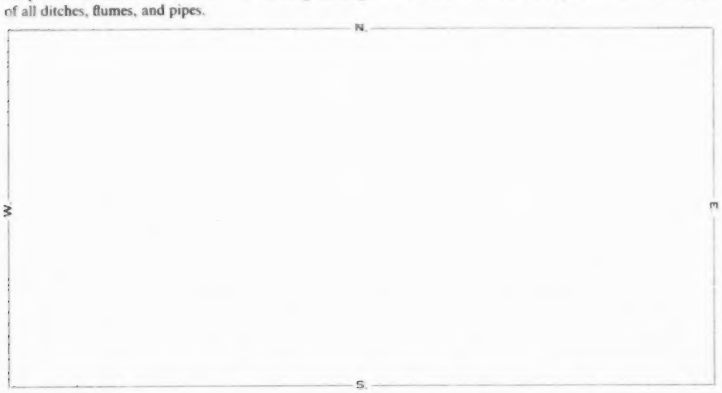
(7) The area of land to be irrigated will be ..... acres.

(8) (*a*) The works will be entirely on my own property, or

(*b*) The works will affect physically the property of the following owners:—

Name of Owner, Including the Crown	Legal Description of Land	Area Required for Works	
		Length	Breadth

Sketch, showing applicant's land and all other land touched by the works or flooded, also the location of the point of diversion and other works, including buildings to be served with water, if applicable, and the lengths of all ditches, flumes, and pipes.



.....
Applicant.

.....
Agent.

WRB 4—0

General Information on Water Law in British Columbia

The Crown owns all water and permits the use of it only by licence under the *Water Act*. A WATER LICENCE is a legal document issued by the COMPTROLLER OF WATER RIGHTS, which specifies the conditions governing the right to the use of water. These conditions, or TERMS of the licence, include a statement of

(*a*) the source of water supply;
(*b*) the point of diversion from the stream;
(*c*) the priority date of the licence;
(*d*) the purpose for which the water is to be used;
(*e*) the maximum quantity of water which may be diverted;
(*f*) the period of the year during which the water may be used;
(*g*) the land to which the licence is appurtenant; and
(*h*) the works authorized to be constructed to collect and convey the water from the stream to the place of use.

Without a water licence it is illegal for any person to divert (or take) surface water from any stream except for fire-fighting, and, provided the water is unrecorded, for domestic use or for prospecting. UNRECORDED WATER is the supply available in a stream in excess of the total quantity for which licences have been issued.

Under the *Water Act* a STREAM means any natural watercourse or source of water supply, whether usually containing water or not, and includes groundwater, and any lake, river, spring, swamp, creek, ravine, or gulch. SURFACE WATER is water above the surface of the ground and, conversely, GROUNDWATER is water below the ground. The *Water Act* does not at present apply to groundwater. Therefore, a licence is not required for a WELL.

A water right belongs, or is APPURTENANT, to the land on which the licence authorizes the water to be used. As long as water is BENEFICIALLY USED, according to the terms of the licence and subject to the provisions of the *Water Act*, the licence stays in force, regardless of who owns the land. The person who is legally entitled to possession of the appurtenant land (usually the assessed owner) automatically becomes the licence holder or LICENSEE.

Every water licence carries a PRIORITY DATE, set by the Comptroller when he issues the licence. The priority date is usually the date when the licensee filed his application for a licence. When more than one licence has been issued on the same stream, the person holding the earliest priority licence has first call on the available supply, or FIRST RIGHT to the use of the water. The person who holds the licence with the next later priority date has second right, and so on. If a stream does not carry enough water at times to satisfy all of the licensed diversions from it, then the person holding the latest priority licence is the first who must stop using water, because his junior right licence is subject to the prior rights of the other licensees.

The rights exercisable under any two licences of *equal* priority date have precedence according to the purpose for which the water may be used, in this order: Domestic, waterworks, mineral-trading, irrigation, mining, industrial, power, hydraulicking, storage, conservation, fluming, conveying, and land improvement.

A water licence does not authorize the licensee to enter upon privately owned land. Before constructing the works authorized under his licence, the licensee should first get permission of every property owner whose land the licensed works will cross, preferably by negotiating a formal easement across each parcel of private land and having this registered in the Land Registry Office. Verbal agreements are not binding and for that reason are not always satisfactory. If an agreement for entry on private land cannot be negotiated, the licensee can EXPROPRIATE an easement over any land reasonably required for the construction and maintenance of the works authorized under his licence. If the works cross Crown land, a permit to authorize this can be obtained upon application. If this Crown land is subsequently sold, the Crown grant will contain a reservation which will in effect give the licensee an easement over the land.

The foregoing is a summary of how the use of water is governed in British Columbia. If you require more specific information, or if you wish to apply for a water licence, contact your local Regional Water Rights Engineer. Regional Offices are located in Victoria, Nelson, New Westminster, Kelowna, Kamloops, and Prince George.

DEPARTMENT OF ENVIRONMENT
Water Resources Service, Water Rights Branch
Parliament Buildings
Victoria, B.C. V8V 1X5

DEPARTMENT OF ENVIRONMENT

Water Resources Service, Water Rights Branch, Parliament Buildings, Victoria, B.C. V8V 1X5

INFORMATION REGARDING APPLICATIONS FOR WATER LICENCES

In order to help you fill in a water application correctly, a few suggestions are set out below:

Application forms must be completed in full. It is particularly important that the quantity of water required is shown.

Domestic purpose: "Means the use of water for household requirements, sanitation, and fire prevention, the watering of domestic animals and poultry, and the irrigation of a garden not exceeding one-quarter of an acre adjoining and occupied with any dwelling-house."

The normal requirement for one household, including the irrigation of a small garden, is 500 gallons a day. However, if the watering of poultry and domestic animals other than pets is included, water requirements may be 1,000 gallons a day.

Irrigation purpose: "Means the beneficial use of water on cultivated land and hay meadows for nourishing crops."

The quantity needed should be stated in acre-feet per annum. An acre-foot of water is the quantity which will cover 1 acre, 1 foot, in depth.

As quantities required for irrigation vary depending on local climate and conditions, the following general guide should be used:

Climate	Quantity Required
Wet or cool	1 acre-foot per acre
Semidry or warm	2–3 acre-feet per acre
Dry or hot	3–4 acre-feet per acre

Thus, if you live in a dry or hot area and wish to irrigate 10 acres you should apply for 40 acre-feet.

Any advice you need regarding water applications can be obtained from the Water Rights Branch offices in the Provincial Government Buildings, at Victoria, Kamloops, Nelson, and at 1905 Kent Road, Kelowna, B.C., 313 Sixth Street, New Westminster, B.C., and 1488 – 4th Avenue, Prince George, B.C.

IF YOUR APPLICATION IS NOT CORRECTLY COMPLETED YOU MAY BE REQUIRED TO MAKE OUT A NEW APPLICATION AT A LATER DATE.

WATER RESOURCES SERVICE
WATER RIGHTS BRANCH

DEPT. OF LANDS, FORESTS AND WATER RESOURCES
WATER RIGHTS BRANCH
JUN 24 197
RECEIVED
NEW WESTMINSTER, B. C.

DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES

17

THE PROVINCE OF BRITISH COLUMBIA—WATER ACT

CONDITIONAL WATER LICENCE

Farms Limited of **Road, R.R. 3, B. C.,**

is/are hereby authorized to **divert and use** water as follows:—

(*a*) The source(s) of the water-supply is/are **Fish Creek.**

(*b*) The point(s) of **diversion** is/are located as shown on the attached plan.

(*c*) The date from which this licence shall have precedence is **24th December, 197 .**

(*d*) The purpose for which the water is to be used is **irrigation.**

(*e*) The maximum quantity of water which may be **diverted is 30 acre feet per annum,** and such additional quantity as the Engineer may from time to time determine should be allowed for losses.

(*f*) The period of the year during which the water may be **used is 1st April to 30th September.**

(*g*) The land upon which the water is to be used and to which this licence is appurtenant is **Lot 3 of Section 3, Township , East Coast Meridian, Plan , of which 30 acres may be irrigated.**

(*h*) The works authorized to be constructed are **diversion structure, pump, pipe & sprinkler system,** which shall be located approximately as shown on the attached plan.

(*i*) The construction of the said works **has been commenced and shall be completed and the water beneficially used on or before the 31st day of December, 1978.**

(j) The diversion of water authorized under this licence may be restricted or prohibited at any time by an order in writing of the Engineer for the New Westminster Water District in order to maintain a minimum flow in the stream for the preservation of fish life.

Original signed by H. D. DeBeck

H. D. DeBeck,
Comptroller of Water Rights.

File No. **03 18** Date issued: **1 April 197** Conditional Licence No. **5**

COPY FOR ENGINEER

PROVINCE OF
BRITISH COLUMBIA

MINISTRY OF THE ENVIRONMENT
WATER RESOURCES SERVICE
VICTORIA, B. C.

WATER RIGHTS BRANCH

Acquisition of Approvals
under Section 7 (1), (b), (c) and (d)
of the Water Act
(Changes in and about a stream)

Every applicant for an approval, or his agent, shall furnish the following particulars to the Comptroller of Water Rights:-

(a) The applicant's name and address: _____

_____

_____

(b) Name or clear description of the stream: _____

_____

(c) The description of changes proposed to be made in and about the stream are: _____

_____

_____

(d) Complete legal descriptions of all lands affected by the change are: _____

_____

_____

(e) Under what authority the applicant intends to acquire all lands, easements and rights-of-way required for the proposed changes in and about the stream: _____

_____

_____

(f) The date by which it is intended to complete the proposed changes in and about the stream: _____

NOTE: No right of expropriation exists under an Approval. If difficulty will be experienced in obtaining easements, it may be better to apply for a water licence instead of an Approval.

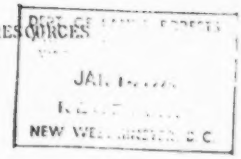
Date: _____

_____
(Applicant or Agent)

Fee: $20.00

_____
(if Agent - Address)

DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER RIGHTS BRANCH
VICTORIA, B.C.



A P P R O V A L

Changes in and about a stream
(Section 7(1), (b), (c) and (d) of the WATER ACT)

W.H. and Sons Ltd. of 3986-: th Street, R.R. #3.
, British Columbia

is/are hereby authorized to make changes in and about a stream as follows:-

(a) The name of the stream is J Swamp.

(b) The changes to be made in and about the stream are construction of a ditch within North-west ¼, Section , Township , East Coast Meridian,

and are located as shown on the attached plan.

(c) This Approval does not authorize entry on privately held or occupied or unoccupied Crown land. The holder of this Approval shall exercise reasonable care to avoid damaging any land, works, trees, or other property and shall make full compensation to the owners for any damage or loss resulting from the exercise thereof.

(d) The work authorized shall be completed on or before the 31st March, 197 and the holder of this Approval shall advise the Comptroller of Water Rights when the changes have been completed.

H.D. DeDeck
Comptroller of Water Rights.

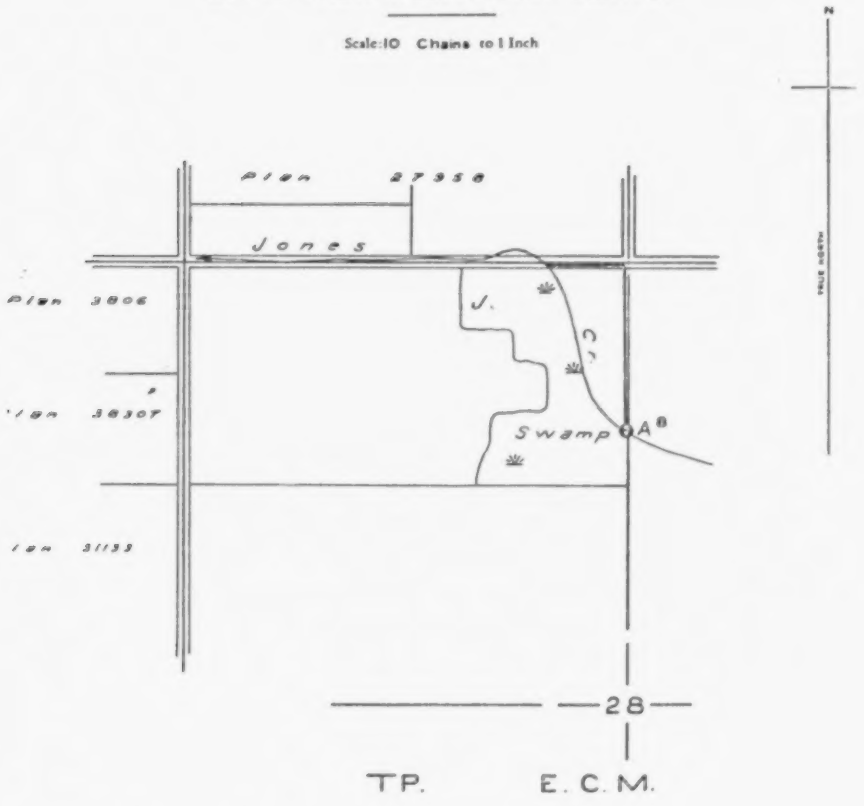
FILE NO.: DATE ISSUED: 2 January 197 APPROVAL #

British Columbia

NEW WESTMINSTER WATER DISTRICT

GP. 2 , NEW WESTMINSTER DISTRICT

Scale: 10 Chains to 1 Inch



LEGEND

Point of Diversion
W.R. Map 5761 C
Ditch

Approval N°. 700

Signature

Date

File

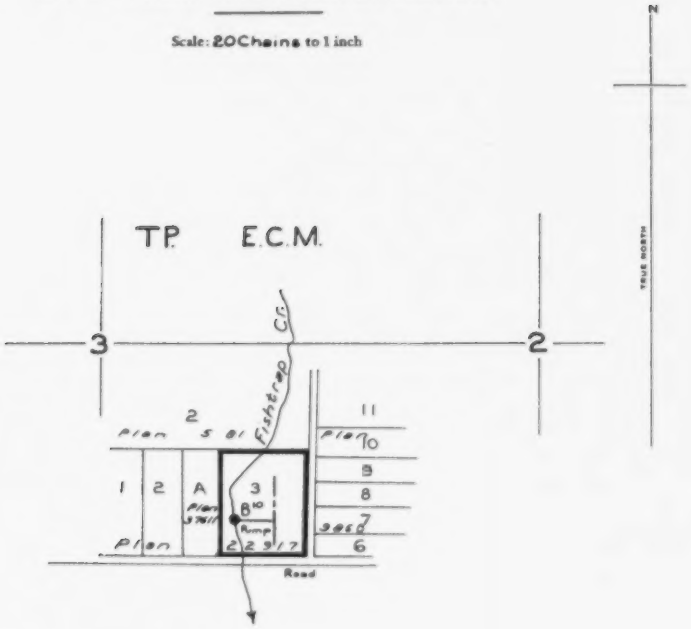
Cloverdale Precinct

British Columbia

NEW WESTMINSTER WATER DISTRICT

GP. 2 , NEW WESTMINSTER DISTRICT

Scale: 20 Chains to 1 inch



LEGEND

Point of Diversion ● 5700^A
W.R. Map
Pipe ——— – ———

The boundaries of the land to which this licence is appurtenant are shown thus: ▬▬

Signature

Date 1st. Apr. 197

C.L.
File

Precinct

MORE INFORMATION - BOOKLETS AND PAPERS AVAILABLE

CANADA'S FISHERIES ACT HAS BEEN AMENDED

Minister of Supply and Services, Ottawa
Cat. no. Fs 99-20/1977 1 SBN 0-662-01152-4

PROPOSALS FOR GUIDELINES FOR WATERSHED MANAGEMENT OF CROWN LANDS USED AS COMMUNITY WATER SUPPLIES

Limited copies from Water Investigations Branch
Ministry of Environment, Victoria

AGRICULTURAL ENVIRONMENTAL CONTROL PROGRAM

Reference information, offices of B.C. Ministry of Agriculture

PESTICIDES, A.V. Miller - 1 SBN 0-7718-8046-4

Pesticide Control Branch, Ministry of Environment, Victoria

THE MANAGEMENT OF COASTAL RESOURCES IN BRITISH COLUMBIA

Lands Directorate, Fisheries and Environment Canada
1001 West Pender Street, Vancouver

DIRECTORY TO THE AGENCIES

INDEX

1. Water Rights Branch Regional offices
2. Federal Department of Fisheries and Oceans District offices
3. Fish and Wildlife Branch Regional and District offices
4. Water Investigations Branch offices
5. Okanagan Basin Implementation Program
6. B.C. District Agriculturists offices
7. Farm and Stream Committee Directory

MINISTRY OF ENVIRONMENT

WATER RIGHTS BRANCH

REGIONAL OFFICES

Kamloops	D.E. Smuin Regional Engineer 523 Columbia St. Kamloops, B.C. V2C 2R9	374-4112
Kelowna	D.B. Lovdahl Acting Regional Engineer 1905 Kent Road Kelowna, B.C. V1Y 7S6	860-6280
Nelson	T.H. Oxland Regional Engineer Provincial Government Bldg. 310 Ward St. Nelson, B.C. V1L 5R4	352-2233
Cranbrook	R. Peters Room 202, 117 Tenth Ave. S. Cranbrook, B.C. V1C 2N1	489-2311
New Westminster	T.W. McCracken Acting Regional Engineer 313 Sixth St. New Westminster, V.C. V3L 3A7	521-9641
Oliver	J.A. Boom Technician Box 10 Oliver, B.C.	498-3830
Prince George	J.H. Dyck Regional Engineer Suite 509, Scotia Bank Bldg. 1488 Fourth Ave. Prince George, B.C. V2L 4Y2	562-8131
Smithers	(vacant) Assistant Regional Engineer Box 1030 Smithers, B.C. V0B 2N0	847-4411
Victoria	P.G. Odynsky Regional Engineer 765 Broughton St. Victoria, B.C. V8V 1E2	387-6477
Williams Lake	D.M. Williams Assistant Regional Engineer Room 311 - 35 Second Ave. Williams Lake, B.C. V2G 3W3	392-6261

FEDERAL DEPARTMENT OF FISHERIES AND OCEANS

Campbell River District

Headquarters	N.J. Lemmen District Supervisor Room 215 - 950 Alder St. Campbell River, B.C. V9W 2P8	287-2102
Alert Bay	M. Farquhar Fishery Officer Box 263 Alert Bay, B.C. VON 1A0	974-5216
Port Hardy	G.S. Zealand Fishery Officer P.O. Box 10 Port Hardy, B.C. VON 2P0	949-6422

Kamloops District

Headquarters	L.C. Goodman District Supervisor Room 202 - 317 Seymour St. Federal Bldg. Kamloops, B.C. V2C 2E9	374-7247
Clearwater	F.O. Voysey Fishery Officer P.O. Box 2013 Clearwater, B.C.	674-9633
Lillooet	H. Meyer Fishery Officer P.O. Box 315 Lillooet, B.C. V0K 1V0	256-4525
Prince George	J.P. Tuyttens Fishery Officer P.O. Box 267, Station A Prince George, B.C. V2L 4S1	564-7030
Quesnel	W.J. Elias Fishery Officer P.O. Box 4340 Quesnel, B.C. V2J 3J3	992-2434

Kitimat District

Headquarters	E.R. Christiansen District Supervisor Room 312 - 450 Federal Bldg. City Centre Kitimat, B.C. V8C 1T6	632-6158
Bella Bella	R.A. Brahniuk Fishery Officer Box 38 Bella Bella, B.C. V0T 1B0	957-2312
Bella Coola	J.M. Greenlee Fishery Officer Box 130 Bella Coola, B.C. V0T 1C0	799-5356

Nanaimo District

Headquarters	D.N. Brock District Supervisor Room 204 - 60 Front St. Nanaimo, B.C. V9R 5H7	753-4181
Comox	J. Trent Fishery Officer P.O. Box 1328 Comox, B.C. V9N 3Z9	339-2031
Duncan	T.F. Fields Fishery Officer P.O. Box 241 Duncan, B.C. V9L 3X3	746-6221
Howe Sound	V. Roxburgh Fishery Officer Box 85 Squamish, B.C. V0N 3G0	892-3230
Parksville	R.P. Kraft Fishery Officer P.O. Box 1120 Parksville, B.C. V0R 2S0	248-6710

Nanaimo District (cont.)

Pender Harbour	L. Chambers Fishery Officer P.O. Box 10 Madeira Park, B.C. V0N 2H0	883-2313
Powell River	Neil Armstrong 4770 Joyce Ave. Powell River, B.C. V8A 3B6	485-9621
West Vancouver	R.S. Racey Fishery Officer 6675 Royal Ave. West Vancouver, B.C. V7W 2B8	921-7811

New Westminster District

Headquarters	G.E. Scott District Supervisor Room 309 - 549 Columbia St. New Westminster, B.C. V3L 1B3	524-7181
Chilliwack	D. Teskey Fishery Officer Suite 5 - 9 Mary St. Chilliwack, B.C. V2P 4G9	792-6011
Mission	J.L. Bentley Fishery Officer P.O. Box 3308 Mission, B.C. V2V 4J5	826-3664
Steveston	J. Duxbury Fishery Officer 1255 #1 Road Richmond, B.C. V7E 1T7	274-7217

Port Alberni District

Headquarters	J.D. McCulloch District Supervisor P.O. Box 280 Federal Building Port Alberni, B.C. V9Y 7M7	724-0195

Port Alberni District (cont.)

Quatsino Sound	G.S. Zealand Fishery Officer Box 10 Port Hardy, B.C. V0N 2P0	949-6422
Tahsis	P.O. Box 549 Tahsis, B.C. V0P 1X0	934-6606
Tofino	C.R. Wilson Fishery Officer Box 48 Tofino, B.C. V0R 2Z0	725-3468

Prince Rupert District

Headquarters	G. Jaltema District Supervisor Room 109 - 417 West Second Ave. Prince Rupert, B.C. V8J 1G8	624-9137
Nass River	W.A. Robinson Fishery Officer P.O. Box 29 Nass Camp Post Office, B.C. V0N 3J0	633-2408
Smithers	A.M. Groat Fishery Officer P.O. Box 578 Smithers, B.C. V0J 2N0	847-2312
Terrace	J. Hipp Fishery Officer 4722 Lakelse Ave. Terrace, B.C. V8G 1R6	635-5952

Queen Charlotte Island District

Headquarters	R.A.H. Slater District Supervisor P.O. Box 99 Queen Charlotte City Queen Charlotte Islands, B.C. V0T 1S0	559-4413

Queen Charlotte Island District (cont.)

Masset	T.J. Morris Fishery Officer P.O. Box 99 Masset, B.C. V0T 1M0	626-3316
Sandspit	L. Gordon Fishery Officer Box 222 Sandspit, B.C. V0T 1T0	637-5340

Rivers and Smith Inlets District

Rivers Inlet	Dawson's Landing Post Office Rivers Inlet, B.C. V0N 1M0	

Victoria District

Headquarters	L.B. Duke District Supervisor Room 116 - 816 Government St. Victoria, B.C. V8W 1W9	388-3252
Sooke	D.N. McDiarmid Fishery Officer Box 831 Sooke, B.C. V0X 1N0	642-5322

Whitehorse District

Headquarters	O.D. Sweitzer District Supervisor 122 Industrial Road Whitehorse, Y.T. Y1A 2T9	(403) 667-2235

FISH AND WILDLIFE BRANCH REGIONAL AND DISTRICT OFFICES

REGION 1, VANCOUVER ISLAND

Regional Headquarters	324 Terminal Ave. Nanaimo, B.C. V9R 5C8	754-2211 or 754-4
District Offices	670 Island Highway Campbell River, B.C. V9W 2C3	287-2241
	Room 209, Courthouse 420 Cumberland Road Courtenay, B.C. V9N 5M6	344-3281
	262 Station Road Duncan, B.C. V9L 1N1	746-6183
	Box 378 Gold River, B.C. V0P 1G0	283-2513
	4515 Elizabeth St. Port Alberni, B.C. V9Y 6L5	723-3501
	Box 1290 Port Hardy, B.C. V0N 2P0	949-6360
	Box 32 Tofino, B.C. V0R 2Z0	725-3926
	1019 Wharf Street Victoria, B.C. V8W 2Y9	387-6411

REGION 2, LOWER MAINLAND

Regional Headquarters	4240 Manor St. Burnaby, B.C. V5G 1B2	435-4137
District Offices	Box 437 Agassiz, B.C. V0M 1A0	796-2788
	13 B Mill St. Chilliwack, B.C. V2P 4N3	792-7274

REGION 2 LOWER MAINLAND (cont.)

	Box 1270 Hope, B.C. V0X 1L0	869-9220
	22725 Selkirk Ave. Maple Ridge, B.C. V2X 2Y1	463-9270
	Box 279 Pemberton, B.C. V0N 2L6	894-6287
	Box 262 6953 Alberni St. Powell River, B.C. V8A 4K3	485-2554
	Box 535 Sechelt, B.C. V0N 3A0	885-2004
	Box 187 38075 Second Ave. Squamish, B.C. V0N 3G0	898-3246
	#2 - 17744 - 57th Ave. Surrey, B.C. V3S 1H2	576-9488

REGION 3 THOMPSON OKANAGAN

Regional Headquarters	106 - 1959 East Trans Canada Hwy. Kamloops, B.C. V2C 4A2	374-5102
District Offices	Box 490 Clearwater, B.C. V0E 1N0	674-3722
	Box 220 Clinton, B.C. V0K 1K0	459-2341
	1923 Kent Road Kelowna, B.C. V1Y 7S6	762-2900
	Box 1126 Merritt, B.C. V0K 2B0	378-2814
	Box 220 Lillooet, B.C. V0K 1V0	256-4636

REGION 3, THOMPSON OKANAGAN (cont.)

	257 Brunswick St. Penticton, B.C. V2A 6P1	493-0008
	Box 1000 Princeton, B.C. V0X 1W0	295-6343
	Box 123 Salmon Arm, B.C. V0E 2T0	832-3726
	5 - 4320 - 29th St. Vernon, B.C. V1T 5B8	542-8436

REGION 4, KOOTENAY

Regional Headquarters	310 Ward Street Nelson, B.C. V1L 1S6	352-2211
District Offices	Room 216, Court House 102 - 11th Ave. South Cranbrook, B.C. V1C 2P3	426-8431
	Box 1550 Creston, B.C. V0B 1G0	428-7611
	Box 640, Courthouse Fernie, B.C. V0B 1M0	423-7551
	Box 1313 Golden, B.C. V0A 1H0	344-6114
	Box 388 Grand Forks, B.C. V0H 1H0	442-8714
	Box 233 Invermere, B.C. V0A 1K0	342-9910
	1565 Victoria Ave. Kimberley, B.C. V1A 3A2	427-2461
	Box 183 Nakusp, B.C. V0G 1R0	265-3522

REGION 4, KOOTENAY (cont.)

	554 Stanley St. Nelson, B.C.	352-2211
	1525 Bay Ave. Trail, B.C. V1R 4B2	364-2025

REGION 5, CARIBOO

Regional Headquarters	540 Borland St. Williams Lake, B.C. V2G 3W2	392-6261
District Offices	Alexis Creek, B.C. V0L 1A0	394-4343
	Box 32 Bella Coola, B.C. V0T 1C0	799-5514
	Box 187, Kilgren Block 100 Mile House, B.C. V0K 2E0	395-4618
	350 Barlow Street Quesnel, B.C. V2J 2C1	992-5591

REGION 6, SKEENA

Regional Headquarters	Box 3250, Courthouse Smithers, B.C. V0J 2N0	847-4411
District Offices	Box 119 Atlin, B.C. V0W 1A0	Phone Atlin 741
	Box 285, Courthouse Burns Lake, B.C. V0J 1G0	692-3566
	Box 55 Cassiar, B.C. V0C 1E0	778-7342
	Box 309 New Hazelton, B.C. V0J 2J0	842-5319
	Court House, 100 Market Place Prince Rupert, B.C. V8J 1B8	624-2121

REGION 6, SKEENA (cont.)

	Box 370 Queen Charlotte City, B.C. V0T 1S0	559-4655
	4829 Keith Ave. Terrace, B.C. V8G 1P4	635-5423

REGION 7, OMINECA PEACE

Regional Headquarters	1777 Third Ave. Prince George, B.C. V2L 3G7	562-8131
District Offices	1201 - 103rd Ave. Dawson Creek, B.C. V1G 4J2	782-5931
	Box 247 Fort Nelson, B.C. V0C 1R0	774-6947
	9711 - 100th Ave. Fort St. John, B.C. V1J 1Y2	785-8011
	Box 39 Valemont, B.C. V0E 2Z0	566-4398
	Box 980 Vanderhoof, B.C. V0J 3A0	567-4467

WATER INVESTIGATIONS BRANCH

P.M. Brady
Director, Water Investigations Branch
Ministry of Environment
Parliament Buildings
Victoria, B.C.
V8V 1X5 387-3420

Marie Elderfield
Environmental Studies Division
Ministry of Environment
380 Cherry Avenue E.
Penticton, B.C.
V2A 3L7 493-4137

Anthea Bryan
Environmental Studies Division
Ministry of Environment
#3 - 2203 - 43rd Street
Vernon, B.C.
V1T 3K7 543-1214

OKANAGAN BASIN IMPLEMENTATION PROGRAM

A.M. Thomson
264 Westminster Street
Box 458
Penticton, B.C.
V2A 6K6 493-3636

BRITISH COLUMBIA DISTRICT AGRICULTURISTS

District Offices

Abbotsford	J.F. Carmichael P.E. Ewert Room 205 - 33780 Laurel St. Abbotsford, B.C. V2S 1X4	853-9012
Chilliwack	T. Dever #5 - 8635 Young Road S. Chilliwack, B.C. V2P 4P3	795-9471
Cloverdale	E.W. Walker Box 1172, Station A Surrey, B.C. V3S 4P9	576-2911
Courtenay	R.K. Demong Room 209 - 420 Cumberland Road Courtenay, B.C. V9N 5M6	334-3321
Cranbrook	M.J. Malmberg Room 202 - 135 Tenth Ave. S. Cranbrook, B.C. V1C 2N1	489-2311
Creston	Box 1980 Creston, B.C. V0B 1G0	
Dawson Creek	K. Potter B. Harper 1201 - 103rd Ave. Dawson Creek, B.C. V1G 4J2	782-5931
Duncan	D.C. Crossfield 303 Provincial Building Duncan, B.C. V9L 1A5	746-6183
Fort St. John	L. Bomford 201 - 9711 - 100th Ave. Fort St. John, B.C. V1J 1Y2	785-8011

DISTRICT AGRICULTURISTS (cont.)

Kamloops	J.C. Ryder 166 Oriole Road Kamloops, B.C. V2C 4N7	374-3614
Oliver	E.M. Soder Box 940, Courthouse Oliver, B.C. V0H 1T0	498-2334 498-2420
Prince George	S. Wrayfield R.R. #1 Experimental Farm Site Prince George, B.C. V2N 2H8	562-8131
Quesnel	G.A. Strachan 208 - 350 Barlow Ave. Quesnel, B.C. V2J 2C1	992-5593
Salmon Arm	E.L. Berry Box 639 Salmon Arm, B.C. V0E 2T0	832-2088
Smithers	C.G. Johnstone Box 518 Smithers, B.C. V0J 2N0	847-4411
Vanderhoof	R.M. Hlatky Box 987 Vanderhoof, B.C. V0J 3A0	567-2563
Vernon	R.T. France 4607 - 23rd Street Vernon, B.C. V1T 4K7	545-1387
Williams Lake	P. Fofonoff 540 Borland Street Williams Lake, B.C. V2G 1R8	392-6261

FARM AND STREAM COMMITTEE

Baehr, Brian	Agricultural Engineering Branch Ministry of Agriculture Room 205 - 33780 Laurel Street Abbotsford, B.C. V2S 1X4	853-6451
Berry, Tom	B.C. Federation of Agricultue Land Use & Taxation Committee 846 Broughton Street Victoria, B.C. V8W 1E4	383-7171
Bird, T.D.	Habitat Protection Division	666-3166
Boyd, F.C.	Resource Services Branch	666-3282
Macfarlane, Stephen	Dept. of Fisheries & Oceans 1090 West Pender St. Vancouver, B.C. V6E 2P1	666-1112
Fuller, Dave	Water Investigations Branch Ministry of Environment Parliament Buildings Victoria, B.C.	387-3255
Gram, Gordon D.	Agricultural Land Commission 4333 Ledger Ave. Burnaby, B.C. V5G 3T3	294-5211
Hurn, D.R.	Habitat Protection Fish & Wildlife Branch Ministry of Environment Parliament Buildings Victoria, B.C.	387-3554
Runka, G. Gary	Agricultural Land Commission 4333 Ledger Ave. Burnaby, B.C. V5G 3T3	294-5211
Stocks, Dick	B.C. Federation of Agriculture Membership Services 846 Broughton St. Victoria, B.C. V8W 1E4	383-7171
Walker, Jim	Habitat Protection Fish & Wildlife Branch Ministry of Environment Parliament Buildings Victoria, B.C.	387-1493
Webber, J.W. (Bill)	Water Rights Branch Ministry of Environment Parliament Buildings Victoria, B.C.	387-3409

Queen's Printer for British Columbia
Victoria, 1979